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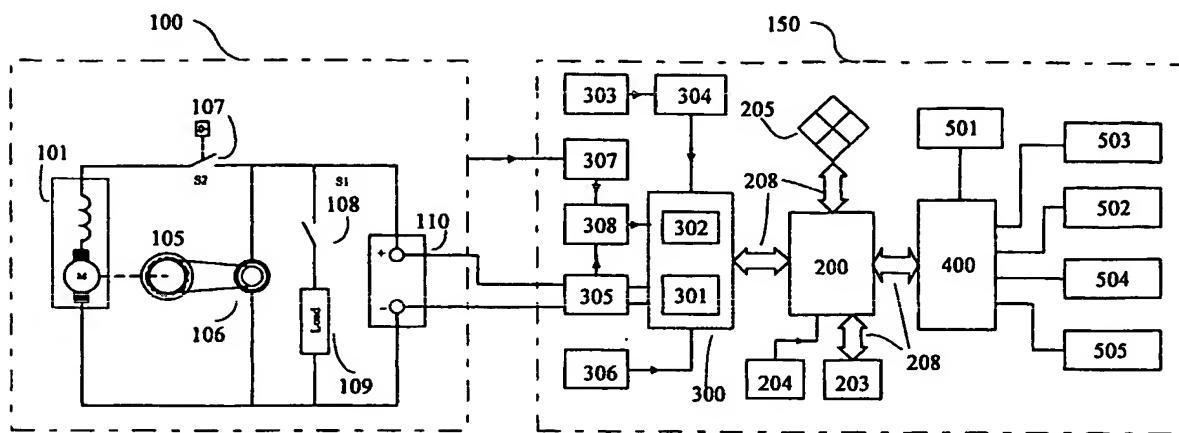


Fig 1

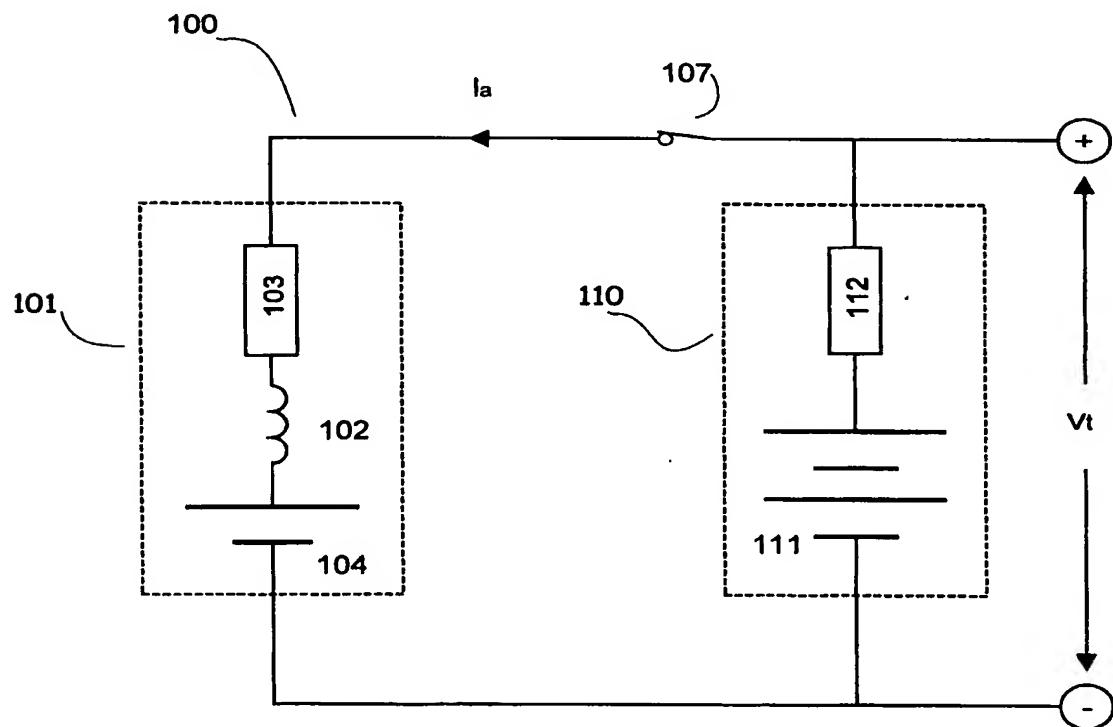


Fig 2

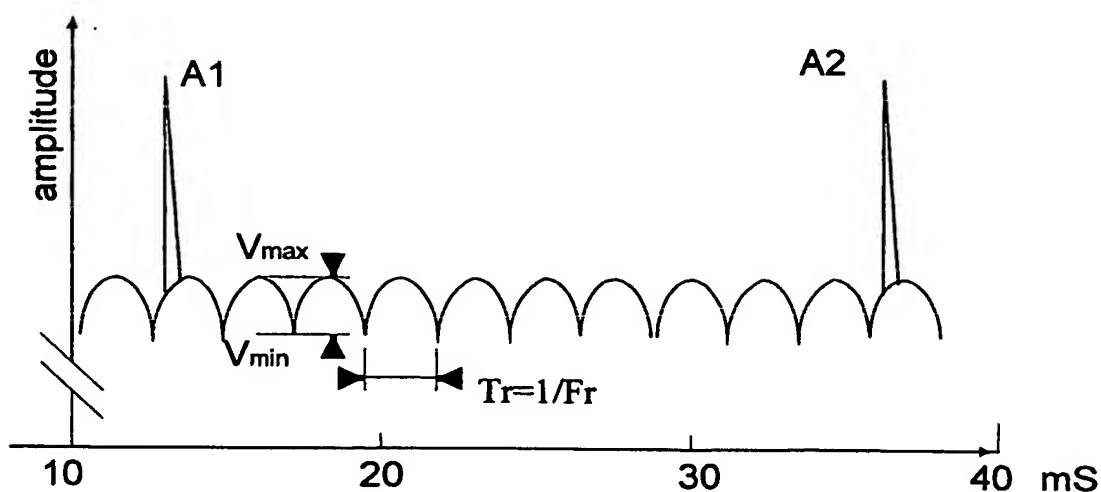


Fig. 2A

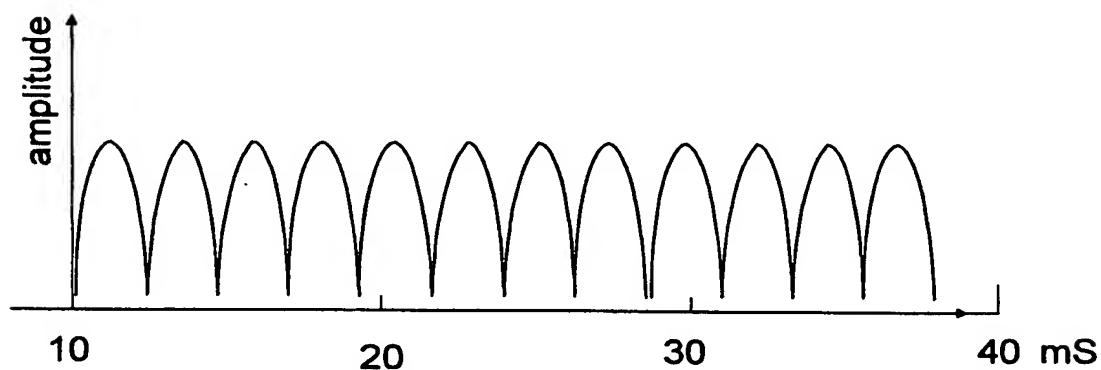


Fig. 2B

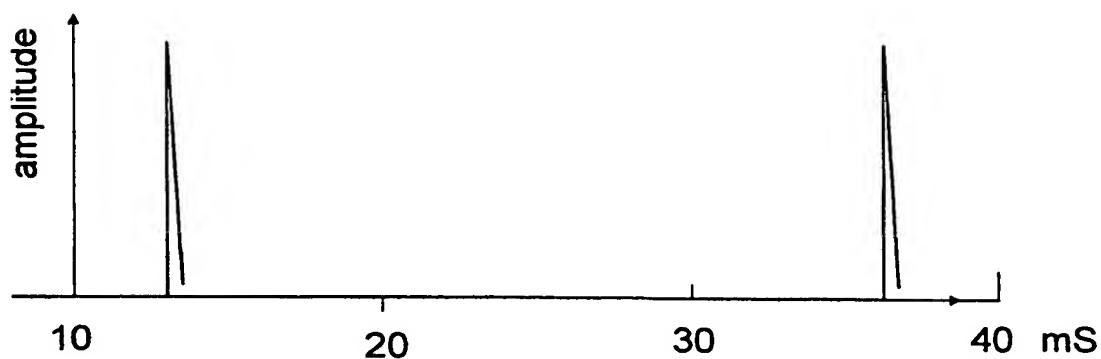


Fig. 2C

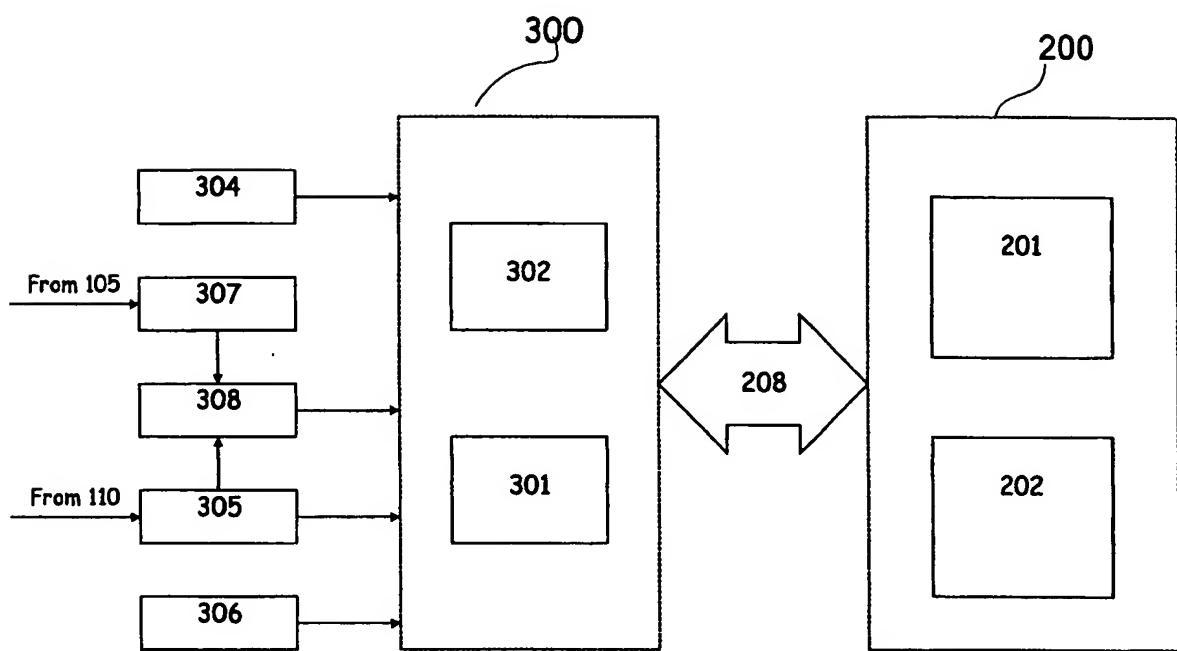


Fig 3

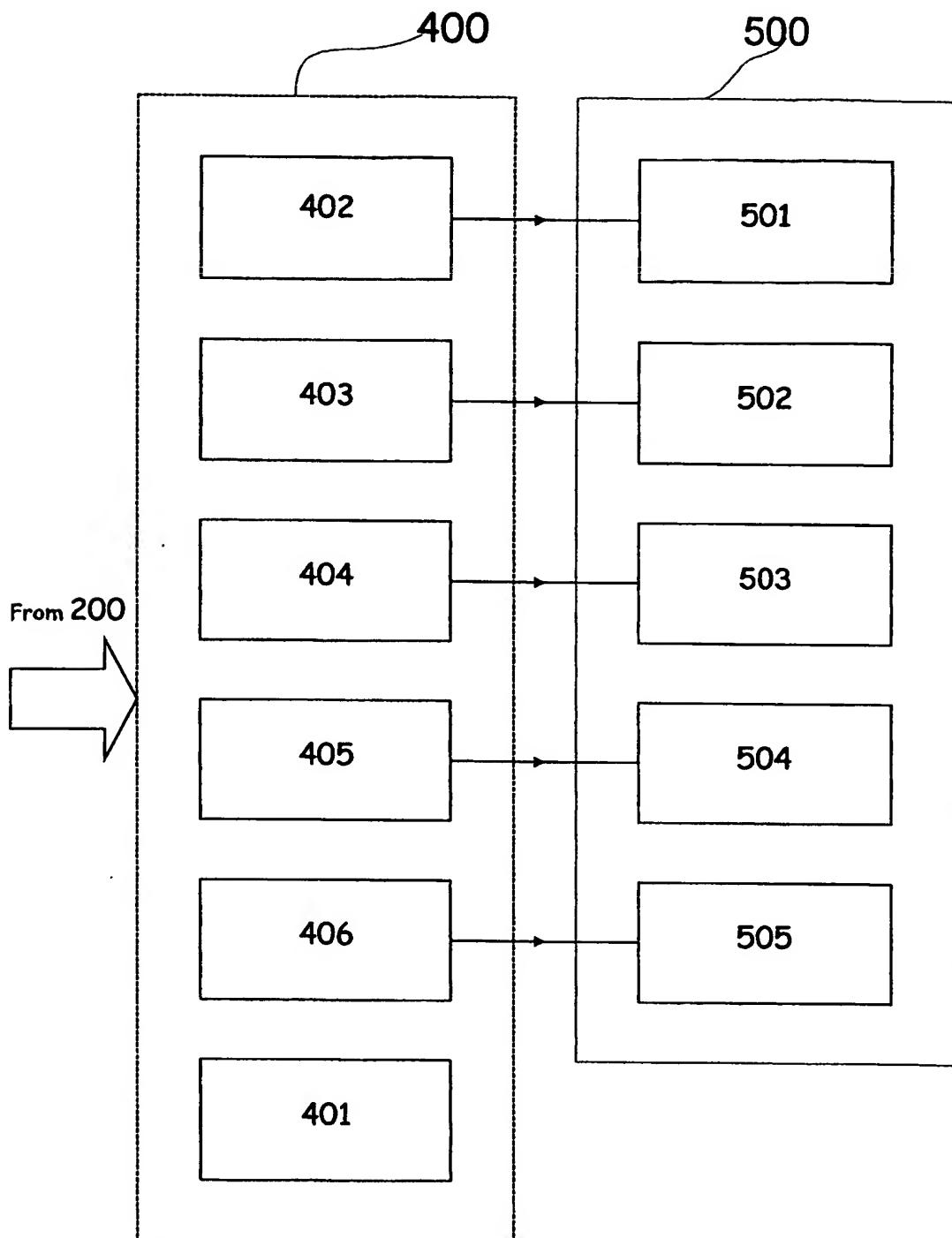


Fig 4

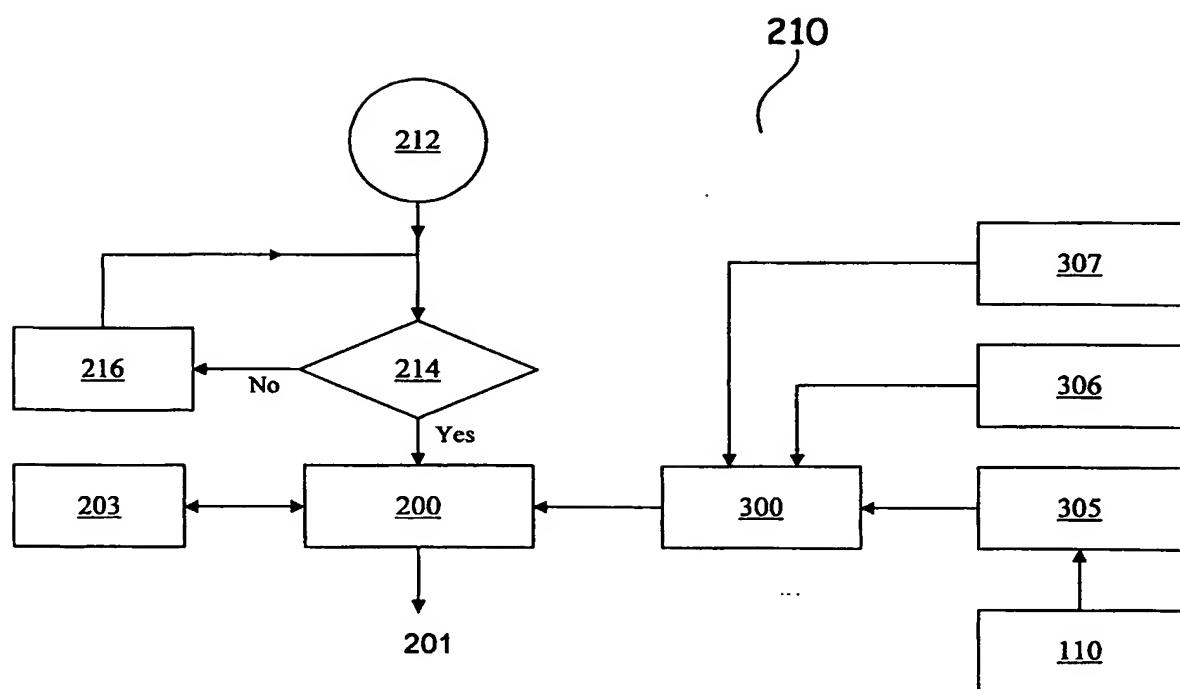


Fig 5

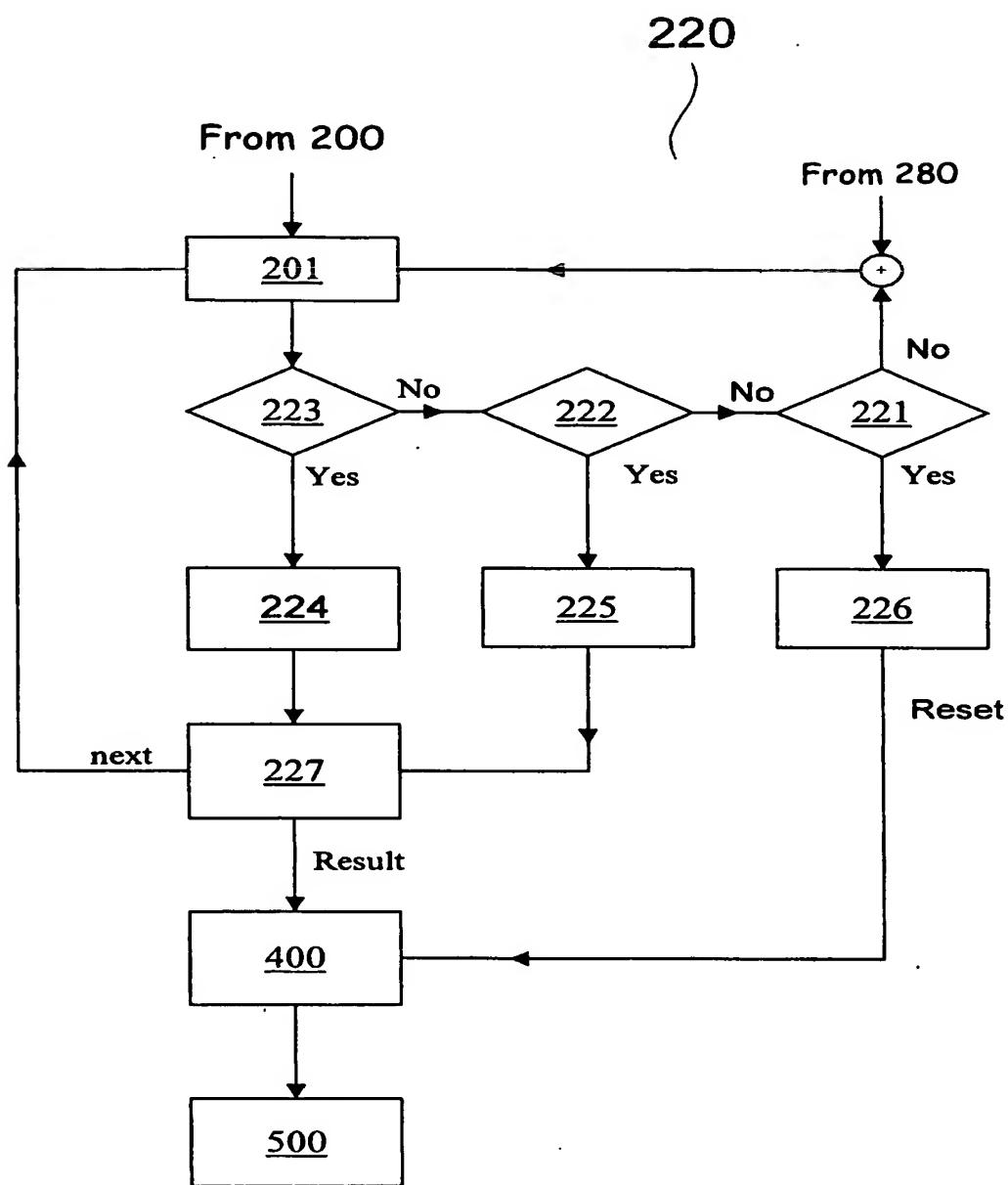


Fig- 6

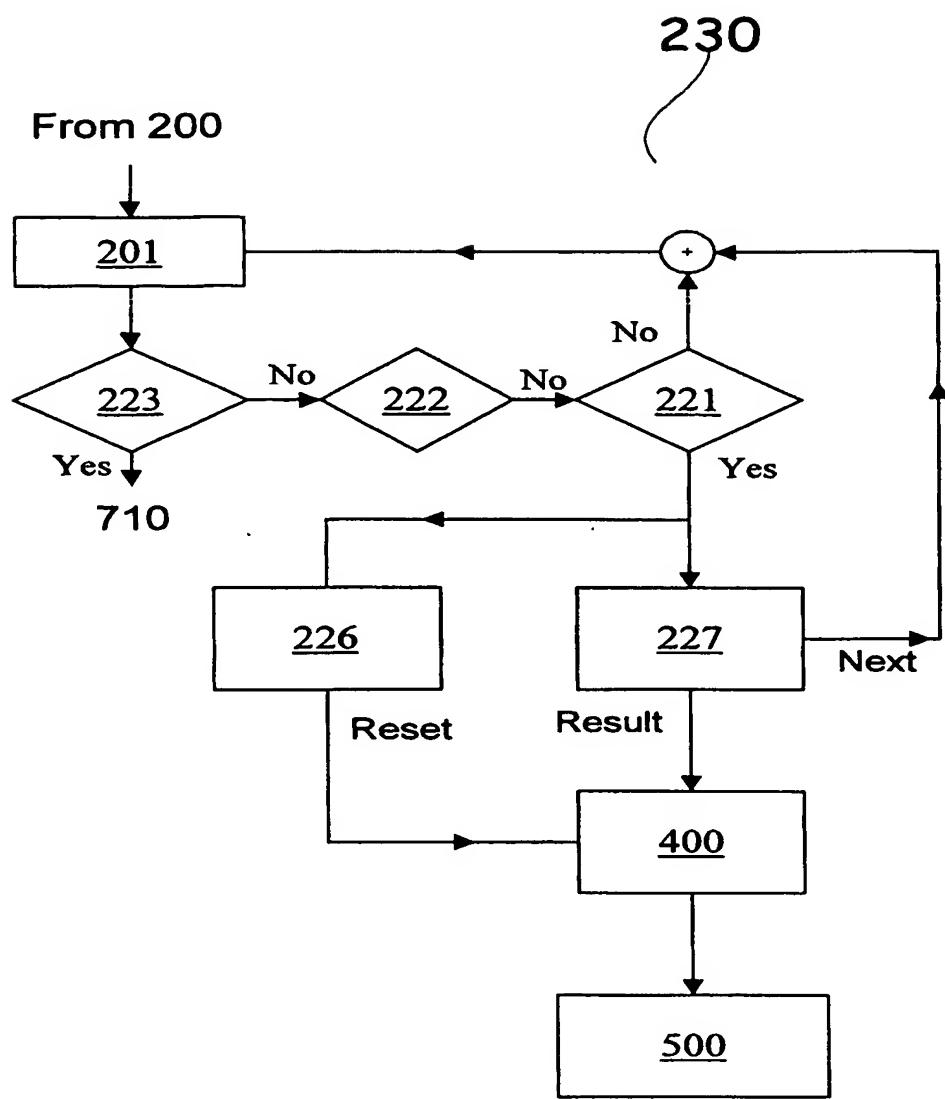
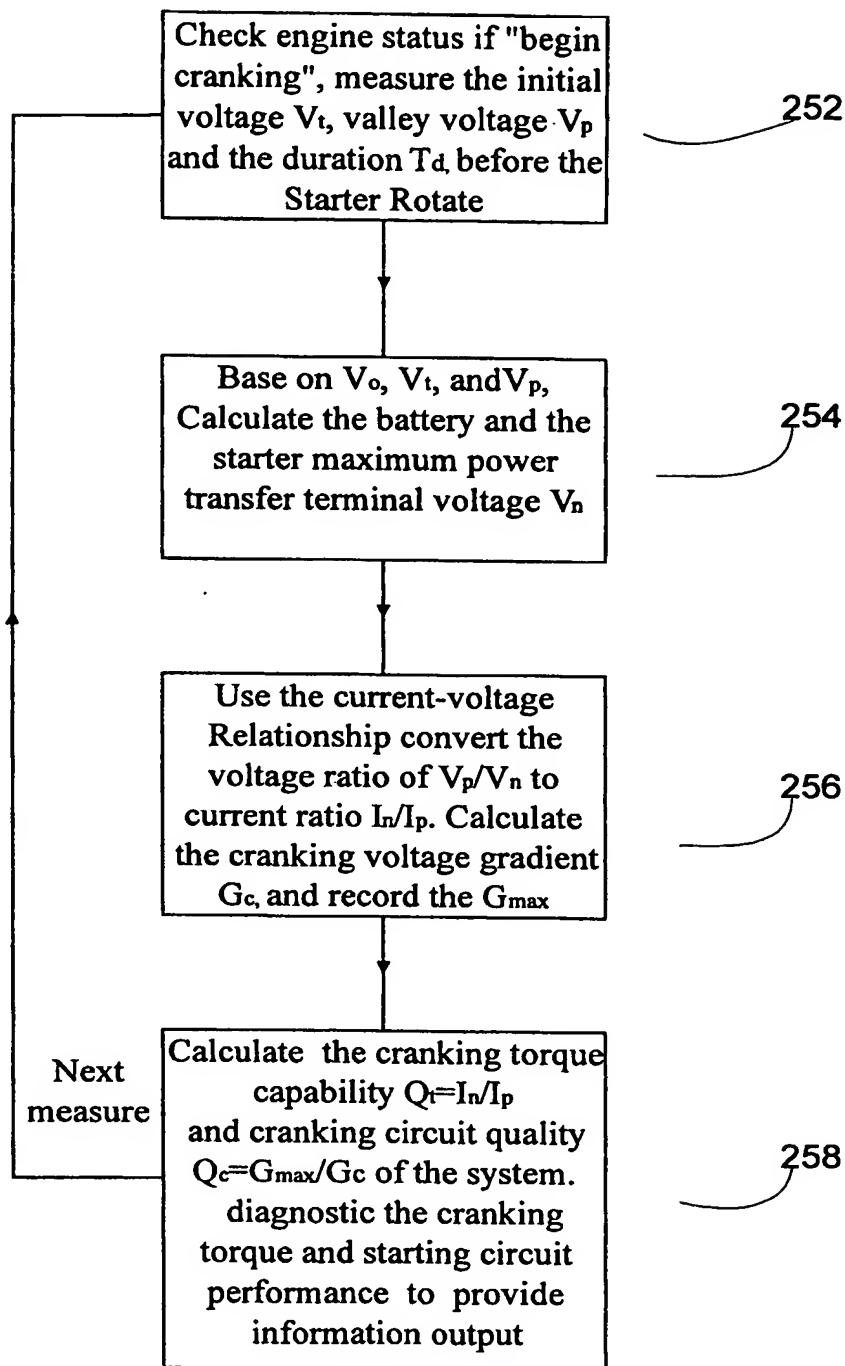


Fig 7

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Fig 8

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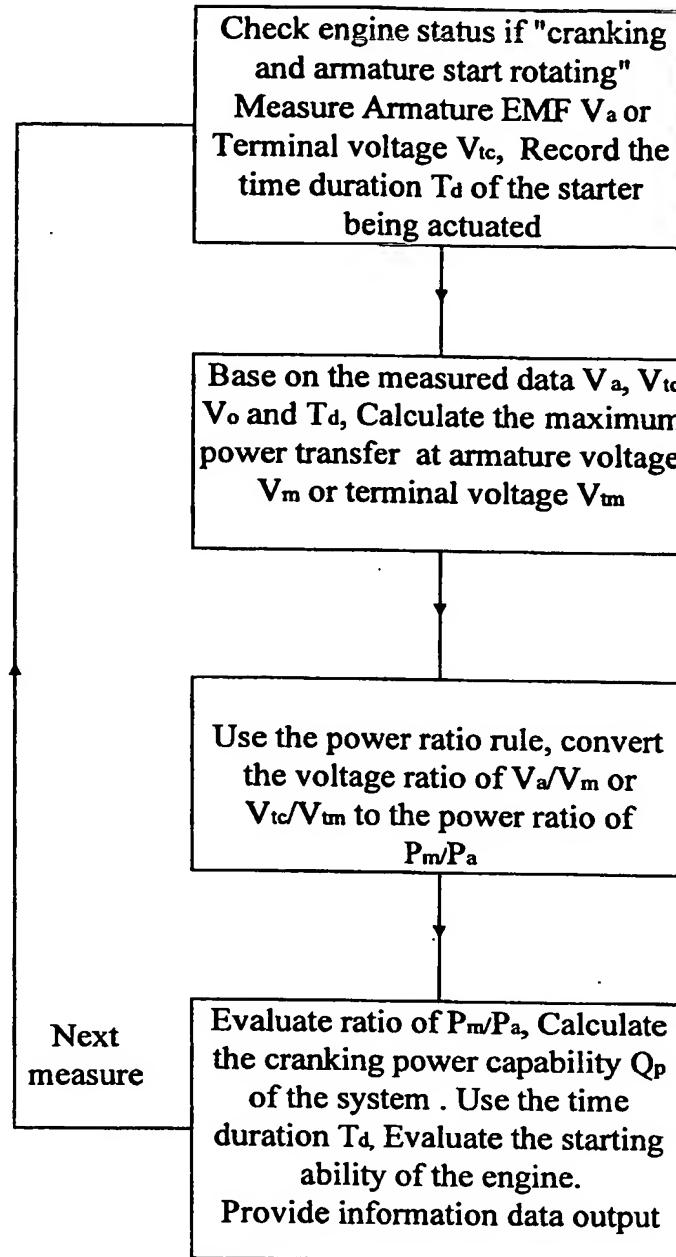
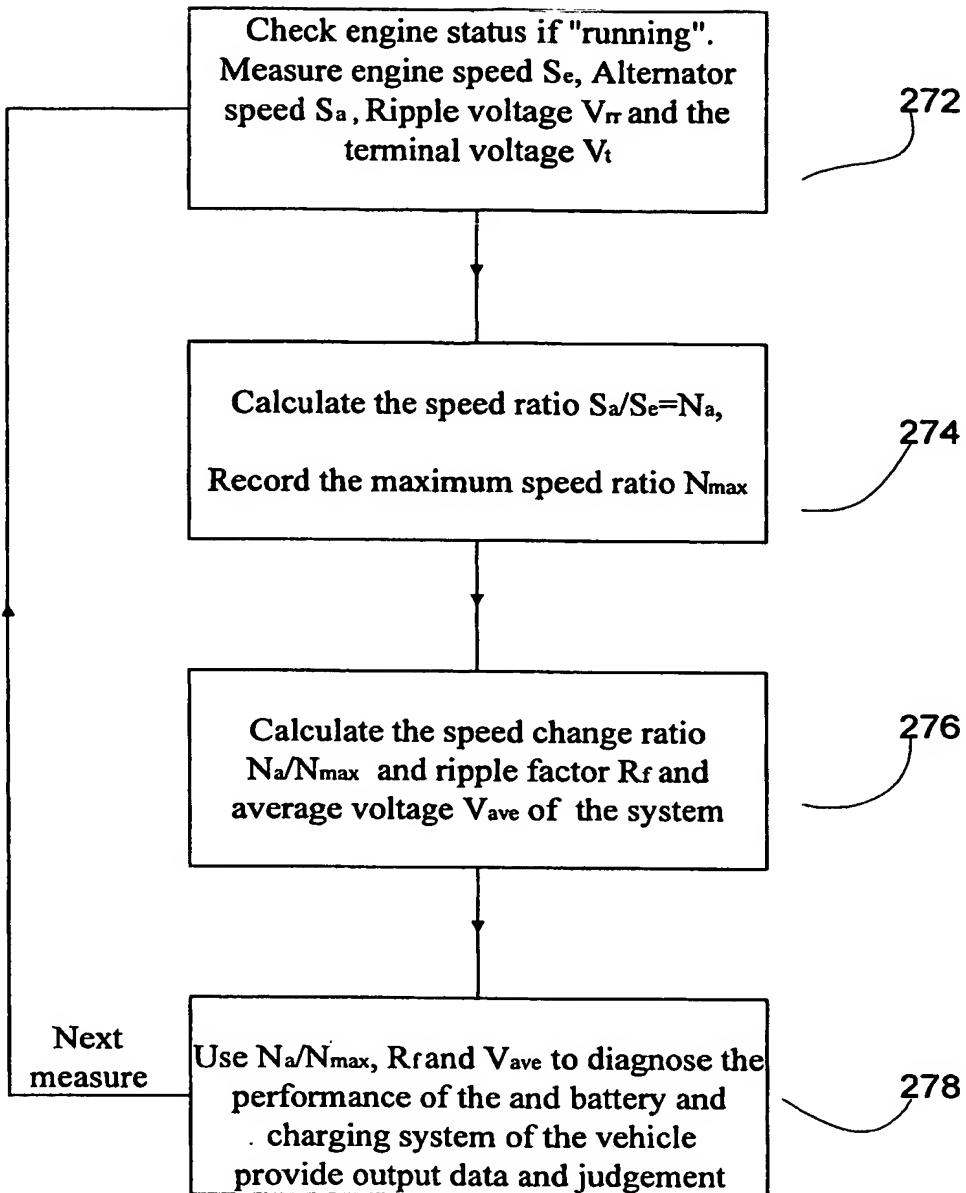
Next  
measure

Fig 9

270



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Fig 10

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282

Check engine status if "Se>0, and Sa=0 or ripple=0", Measure the terminal voltage  $V_t$  and the time  $t$  record the voltage and time correspondingly

284

Confirm the alternator not function  
Calculate the voltage change rate  
 $Y=(V_{t0}-V_{t1})/t$  lets  $t=60sec$   
and update  $Y$  every 10 sec

286

Calculate the remnant time  
 $X=(V_t-BV_0)/Y$  determine the time in Min or Hour remnant operation of the system

288

Diagnose  $X$  data  
Provide output data of the evaluated judgement message.

**Fig 11**